

REMARKS

The Office Action mailed on December 17, 2002, has been received and reviewed.

Claims 1 through 23 are currently pending in the above-referenced application, each standing rejected.

Reconsideration of the above-referenced application is respectfully requested.

Preliminary Amendment

Please note that a Preliminary Amendment was filed in the above-referenced application on October 17, 2001, but that entry thereof into the Office file for the above-referenced application has not yet been acknowledged. If, for some reason, the Preliminary Amendment has not been entered into the Office file, the undersigned attorney will be happy to provide a copy to the Examiner.

Claim Objections

Claims 3 and 15 have been objected to under 37 C.F.R. § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claims 3 and 15 both recite marking chips that have been characterized for use “as the last step in the production process.” It is respectfully submitted that this recitation further limits the act of “marking” recited in independent claims 1 and 13, respectively, which is merely limited to “chips which are characterized for use” without indicating a point in the production process where such “marking” is effected.

As such, it is respectfully submitted that claims 3 and 15 are of proper dependent form, as required by 37 C.F.R. § 1.75(c) and, thus, requested that the objections to these claims under 37 C.F.R. § 1.75(c) be withdrawn.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 19 through 23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, claims 19 through 23 have been rejected because claim 19, from which claims 20 through 23 depend, and claims 20 through 22 recite the term “acceptable.”

Claims 19 through 22 have each been amended to remove the term “acceptable,” resulting in broader claim which no longer include the purportedly indefinite term.

It is, therefore, respectfully submitted that claims 19 through 23 clearly comply with the provisions of 35 U.S.C. § 112, second paragraph, and are allowable.

Rejections Under 35 U.S.C. § 102(b)

Claims 1 through 18 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,594,263 to Folk et al. (hereinafter “Folk”).

Applicant submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Folk describes a process for marking semiconductor devices that have been packaged in metal. The process of Folk includes cleaning the surface of the metal package, using electroless plating techniques to form a nickel layer thereon, cleaning residual salts from the metal package and the nickel layer, and exposing the nickel to acid to convert it to an optically black form which is highly absorptive of laser energy. When marking is desired, such as when a semiconductor device package has been tested and it is determined that the semiconductor device is suitable for use, selected locations of the optically black coating on the nickel layer may be exposed to a laser to expose the underlying, shiny nickel at those locations, thereby forming a mark on the metal semiconductor device package.

Each claim of independent claims 1, 7, and 13 recites, among other things, marking a semiconductor chip which has been characterized for use “by exposing selected locations of at least one of a surface of [the] at least one semiconductor chip and an energy-reactive marking material to energy to cause [the] energy-reactive marking material to adhere to [the] surface.”

As Folk lacks any express or inherent description whatsoever of “exposing selected locations of” a surface of a semiconductor chip or an energy-reactive marking material “to energy

to cause [the] energy-reactive marking material to adhere to [the] surface” of the semiconductor chip, it is respectfully submitted that Folk does not and cannot anticipate each and every element of any of independent claims 1, 7, and 13, as is required by 35 U.S.C. § 102(b). It is, therefore, respectfully submitted that, under 35 U.S.C. § 102(b), independent claims 1, 7, and 13 are each allowable over Folk.

Claims 2 through 6 are each allowable, among other reasons, as depending either directly or indirectly from claim 1, which is allowable.

Each claim of claims 8 through 12 is allowable, among other reasons, as depending either directly or indirectly from claim 7, which is allowable.

Claims 14 through 18 are each allowable, among other reasons, as depending either directly or indirectly from claim 13, which is allowable.

In summary, for these reasons set forth herein, it is respectfully submitted that claims 1 through 18 are allowable over the cited prior art under 35 U.S.C. § 102(b).

Rejections Under 35 U.S.C. § 103(a)

Claims 19 through 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Folk.

Applicant submits that in order to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the disclosure of the patent application at issue.

Each of claims 19 through 23 recites an additional limitations regarding the embodiments of the inventions set forth in such claims and, thus, complies with the requirements of 35 U.S.C. § 101. Therefore, the assertion that claims 19 through 23 “would merely add complexity to the disclosed process without providing any advantages or producing any unexpected results” does

not excuse the Patent and Trademark Office for examining the subject matter recited in these claims to determine their patentability.

Claims 19 through 23 are each allowable, among other reasons, as depending either directly or indirectly from claim 13, which is allowable.

Claim 19 is further allowable since Folk lacks any teaching or suggestion of comparing an identifying indicia to an identifying indicia model to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention.

Claim 20, which depends from claim 19, is additionally allowable because Folk does not teach or suggest “determining whether [an] identifying indicia substantially matches [an] identifying indicia model” model to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention.

Claim 21 depends from claim 20 and is also allowable since Folk neither teaches nor suggests “rejecting . . . at least one semiconductor chip which has been characterized for use if its respective identifying indicia does not substantially match [the] identifying indicia model” model to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention.

Claim 22, which depends from claim 21, is additionally allowable since Folk does not teach that an identifying indicia may be removed from a semiconductor chip model to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention.

Claim 23, which depends from claim 22, is further allowable because Folk includes no teaching or suggestion that a semiconductor chip which has been rejected as not having a suitable identifying indicia may be remarked model to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention.

If any of the acts that are recited in claims 19 through 23 would have been obvious to one of ordinary skill in the art, the Office is respectfully invited to cite one or more pieces of prior art to assert any indication of the obviousness under 35 U.S.C. § 103 regarding the limitations of such embodiments of the inventions set forth in such claims. Otherwise, without the citation of any prior art regarding such limitations of such claims, 35 U.S.C. § 103(a) requires that claims 19 through 23 are allowable.

In view of the foregoing, withdrawal of the 35 U.S.C. § 103(a) rejections of claims 19 through 23 is respectfully requested.

CONCLUSION

It is respectfully submitted that each of claims 1 through 23 is allowable over the cited prior art. An early notice of the allowability of these claims, as well as an indication that the above-referenced application has been passed for issuance, are respectfully solicited. If any issues preventing allowance of the above-referenced application remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,



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Enclosure: Version with Markings to Show Changes Made

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend the claims as follows:

1. (Amended) In a method of producing semiconductor chips wherein the chips are at least fabricated and characterized, the improvement comprising:

marking with identifying indicia only those chips which are characterized for use by exposing selected locations of at least one of a surface of at least one semiconductor chip and an energy-reactive marking material to energy to cause said energy-reactive marking material to adhere to said surface.

5. (Twice amended) The method of claim 1, wherein said marking comprises: providing said energy-reactive marking material over [a] said surface of said at least one semiconductor chip[which is characterized for use; and exposing at least selected portions of at least one of said surface and said energy reactive marking material to energy to form a mark on said surface].

7. (Amended) A method for producing semiconductor chips, comprising: fabricating at least one semiconductor chip; determining whether said at least one semiconductor chip is suitable for use; and marking said at least one semiconductor chip only if said at least one semiconductor chip is determined to be suitable for use by exposing selected locations of at least one of a surface of said at least one semiconductor chip and an energy-reactive marking material to energy to cause said energy-reactive marking material to adhere to said surface.

11. (Amended) The method of claim 7, wherein said marking comprises: providing said energy-reactive marking material over at least a portion of [a] said surface of said at least one semiconductor chip[; and

exposing at least selected portions of at least one of said surface and said energy reactive marking material to energy to form a mark on said surface].

13. (Twice amended) A method for producing semiconductor chips, comprising:
providing at least one semiconductor chip which has been characterized as suitable for use and at least one semiconductor chip which has been characterized as unsuitable for use; and
marking with identifying indicia only said at least one semiconductor chip which has been characterized as suitable for use by exposing selected locations of at least one of a surface of said at least one semiconductor chip and an energy-reactive marking material to energy to cause said energy-reactive marking material to adhere to said surface.

17. (Amended) The method of claim 13, wherein said marking comprises:
providing said energy-reactive marking material over at least a portion of said [a] surface of said at least one semiconductor chip which has been characterized as suitable for use[; and
exposing at least selected portions of at least one of said surface and said energy reactive marking material to energy to form a mark on said surface].

19. (Amended) The method of claim 13, further comprising comparing said identifying indicia to an [acceptable] identifying indicia model.

20. (Amended) The method of claim 19, further comprising determining whether said identifying indicia substantially matches said [acceptable] identifying indicia model.

21. (Amended) The method of claim 20, further comprising rejecting said at least one semiconductor chip which has been characterized as suitable for use if its respective identifying indicia does not substantially match said [acceptable] identifying indicia model.

22. (Twice amended) The method of claim 21, further comprising removing said identifying indicia which does not substantially match said [acceptable] identifying indicia model

from said [rejected] at least one rejected semiconductor chip which has been characterized as suitable for use.

23. (Twice amended) The method of claim 22, further comprising remarking said [rejected] at least one rejected semiconductor chip which has been characterized as suitable for use.

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